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Supplementary Table 1. Cardiac parameters from cross-fostered male offspring at 52 weeks of age.

Males	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
TRAINED-SED	418.2 \pm 14.4	3.37 \pm 0.18	4.5 \pm 0.14	47.5 \pm 5.9	92.1 \pm 7.0	44.6 \pm 2.8	46.5 \pm 3.6	18.6 \pm 1.18	114.2 \pm 4.9	1.29 \pm 0.03	0.84 \pm 0.01
SED-TRAINED	393.4 \pm 11.5	3.17 \pm 0.12	4.38 \pm 0.14	41.2 \pm 3.8	88.2 \pm 6.3	47.0 \pm 3.6	57.3 \pm 2.1*#	18.2 \pm 1.12	116.9 \pm 5.3	1.40 \pm 0.02	0.91 \pm 0.03
SED-SED	435.4 \pm 9.0	3.44 \pm 0.08	4.57 \pm 0.08	49.3 \pm 2.9	96.4 \pm 4.1	47.0 \pm 2.5	48.3 \pm 1.9	20.5 \pm 1.10	130.4 \pm 4.5	1.36 \pm 0.04	0.93 \pm 0.02
TRAINED-TRAINED	453.7 \pm 16.5	3.50 \pm 0.13	4.60 \pm 0.10	50.8 \pm 4.3	96.3 \pm 5.1	45.5 \pm 4.2	54.7 \pm 3.6*	20.6 \pm 2.14	123.0 \pm 4.5	1.26 \pm 0.04	0.86 \pm 0.04

Data are expressed as mean \pm SEM (TRAINED-SED $n=8$, SED-TRAINED $n=8$, SED-SED $n=8$, TRAINED-TRAINED $n=10$). One-way ANOVA was used with Tukey's multiple comparisons tests. * $P<0.05$ vs. SED-SED mice; # $P<0.05$ TRAINED-SED mice.

Supplementary Table 2. Cardiac parameters from cross-fostered female offspring at 52 weeks of age.

Females	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
TRAINED-SED	369.1 \pm 18.8	3.27 \pm 0.29	4.30 \pm 0.17	44.9 \pm 9.4	82.4 \pm 7.3	37.5 \pm 7.3	38.3 \pm 5.4	13.8 \pm 2.87	90.5 \pm 8.6	1.11 \pm 0.06	0.72 \pm 0.10
SED-TRAINED	422.4 \pm 23.5	3.10 \pm 0.08	4.23 \pm 0.10	38.2 \pm 2.4	80.6 \pm 4.3	42.5 \pm 3.1	53.0 \pm 2.1*	17.8 \pm 1.29	97.2 \pm 3.7	1.2 \pm 0.03	0.78 \pm 0.04
SED-SED	439.2 \pm 17.9	2.92 \pm 0.11	3.97 \pm 0.14	33.3 \pm 3.0	70.0 \pm 5.5	36.5 \pm 3.2	40.7 \pm 6.0	16.1 \pm 1.70	104.8 \pm 6.4	1.31 \pm 0.03	0.90 \pm 0.02
TRAINED-TRAINED	462.5 \pm 0.1	2.68 \pm 0.07	3.63 \pm 0.01	26.5 \pm 1.7	55.6 \pm 0.2	29.1 \pm 1.4	49.0 \pm 2.8	13.5 \pm 0.7	104.0 \pm 0.2	1.33 \pm 0.01	0.98 \pm 0.00

Data are expressed as mean \pm SEM (TRAINED-SED $n=8$, SED-TRAINED $n=9$, SED-SED $n=8$, TRAINED-TRAINED $n=9$). One-way ANOVA was used with Tukey's multiple comparisons tests. * $P<0.05$ vs. SED-SED mice; # $P<0.05$ TRAINED-SED mice.

* $P<0.05$ vs. TRAINED-SED mice.

Supplementary Table 3. Demographics of human subjects (N=139).

	Mean \pm SD
Maternal Age	30.50 \pm 3.32
Maternal BMI	25.45 \pm 4.06
Maternal Fat Mass (%)	24.70 \pm 8.83
	N (%)
Maternal Race	
African American	11 (7.91)
Caucasian	122 (87.77)
Other Races	6 (4.32)

Supplementary Table 4. Regression Analyses for Steps, BMI, and 3'SL (N=139).

Term	Estimate	Std Error	Statistic	P value
Intercept	536.555	160.477	3.343	0.001
Steps	0.028	0.011	2.595	0.010
BMI	-11.745	5.016	-2.341	0.021

Supplementary Table 5. Cardiac parameters from WT or 3SL, sedentary or trained male offspring at 52 weeks of age.

Males	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
Wild-type Sedentary	398.6 \pm 15.2	3.06 \pm 0.12	4.25 \pm 0.11	37.7 \pm 3.4	81.8 \pm 4.7	44.1 \pm 1.6	54.8 \pm 1.9	17.5 \pm 0.85	130.9 \pm 6.0	1.39 \pm 0.05	0.89 \pm 0.03
Wild-type Trained	380.7 \pm 8.1	3.19 \pm 0.10	4.24 \pm 0.10	41.8 \pm 3.2	81.4 \pm 4.1	39.6 \pm 1.2	49.4 \pm 2.0	15.1 \pm 0.88	108.7 \pm 4.6	1.32 \pm 0.05	0.89 \pm 0.03
3'SL ^{-/-} Sedentary	499.1 \pm 8.4	3.38 \pm 0.08	4.32 \pm 0.106	47.3 \pm 2.8	84.4 \pm 2.9	37.1 \pm 2.9	43.8 \pm 3.0	18.5 \pm 1.47	105.6 \pm 8.9	1.30 \pm 0.03	0.95 \pm 0.03
3'SL ^{-/-} Trained	431.8 \pm 20.7	3.09 \pm 0.18	4.24 \pm 0.10	38.8 \pm 5.7	81.0 \pm 4.8	42.2 \pm 3.6	52.9 \pm 4.8	18.1 \pm 1.63	106.7 \pm 8.6	1.28 \pm 0.05	0.87 \pm 0.05

Data are expressed as mean \pm SEM (WT Sed n=18, WT Train n=21, 3'SL^{-/-} Sed n=9, 3'SL^{-/-} Train n=9). One-way ANOVA was used with Tukey's multiple comparisons tests.

Supplementary Table 6. Cardiac parameters from WT or 3SL, sedentary or trained female offspring at 52 weeks of age.

Females	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
Wild-type Sedentary	362.8 \pm 9.2	2.89 \pm 0.09	3.96 \pm 0.06	33.3 \pm 2.8	69.2 \pm 2.2	35.9 \pm 1.3	53.1 \pm 2.2	13.3 \pm 0.65	93.0 \pm 5.5	1.19 \pm 0.03	0.80 \pm 0.03
Wild-type Trained	371.0 \pm 8.6	2.65 \pm 0.07	3.77 \pm 0.06*#	26.3 \pm 1.5	61.3 \pm 2.1*#	35.0 \pm 1.1	57.7 \pm 1.5*#	12.9 \pm 0.41	82.5 \pm 3.7*#	1.22 \pm 0.04	0.77 \pm 0.03
3'SL ^{-/-} Sedentary	483.1 \pm 5.5	3.20 \pm 0.08	4.13 \pm 0.05	41.4 \pm 2.5	75.9 \pm 2.4	34.5 \pm 1.2	45.8 \pm 1.9	16.6 \pm 0.51	97.2 \pm 5.3	1.20 \pm 0.05	0.81 \pm 0.04
3'SL ^{-/-} Trained	479.7 \pm 13.5	3.17 \pm 0.08	4.20 \pm 0.05	40.8 \pm 2.4	78.9 \pm 2.2	38.1 \pm 1.7	48.7 \pm 2.3	18.1 \pm 1.63	105.7 \pm 6.5	1.19 \pm 0.04	0.86 \pm 0.03

Data are expressed as mean \pm SEM (WT Sed n=30, WT Train n=25, 3'SL^{-/-} Sed n=5, 3'SL^{-/-} Train n=7). One-way ANOVA was used with Tukey's multiple comparisons tests. *P<0.05 vs. wild-type sedentary mice; #P<0.05 vs. 3'SL^{-/-} mice.

Supplementary Table 7. Cardiac parameters from 3'SL^{-/-} male and female mice cross-fostered to wild-type mice at 52 weeks of age.

	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
3'SL to WT (MALES)	429.9 \pm 22.7	3.1 \pm 0.07	4.17 \pm 0.01	36.6 \pm 2.0	77.5 \pm 4.5	40.9 \pm 2.5	52.8 \pm 0.57	17.6 \pm 1.5	111.2 \pm 8.9	1.31 \pm 0.01	0.90 \pm 0.03
3'SL to WT (FEMALES)	445.3 \pm 25.8	2.67 \pm 0.06	3.7 \pm 0.05	26.3 \pm 1.4	58.1 \pm 1.8	31.8 \pm 1.1	54.8 \pm 1.6**	14.2 \pm 1.1	93.1 \pm 5.7	1.36 \pm 0.04	0.93 \pm 0.04

Data are expressed as mean \pm SEM (3'SL-WT males n=5, 3'SL-WT females n=5). One-way ANOVA was used with Tukey's multiple comparisons tests **P<0.01 vs. 3'SL^{-/-} mice.

Supplementary Table 8. Cardiac parameters of male offspring from wild-type mice cross-fostered to 3'SL^{-/-} sedentary or trained dams at 52 weeks of age.

Males	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
WT to 3'SL Sed	431.4 \pm 21.0	3.22 \pm 0.19	4.18 \pm 0.09	41.9 \pm 5.9	77.97 \pm 4.1	36.1 \pm 1.8	46.5 \pm 4.7	15.6 \pm 1.5	110.2 \pm 3.7	1.3 \pm 0.06	0.86 \pm 0.06
WT to 3'SL T	396.0 \pm 6.0	2.9 \pm 0.04	4.0 \pm 0.01	33.3 \pm 1.0	70.2 \pm 0.4	36.9 \pm 0.7	52.7 \pm 1.3	14.6 \pm 0.03	107.7 \pm 5.6	1.4 \pm 0.04	0.97 \pm 0.06

Data are expressed as mean \pm SEM (WT-3'SL Sed n=3, WT-3'SL T n=5). Unpaired two-tailed Student's t-test was used.

Supplementary Table 9. Cardiac parameters of female offspring from wild-type mice cross-fostered to 3'SL^{-/-} sedentary or trained dams at 52 weeks of age.

Females	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
WT to 3'SL Sed	437.0 \pm 10.3	2.57 \pm 0.02	3.57 \pm 0.05	24.0 \pm 0.4	53.3 \pm 1.6	29.3 \pm 2.1	54.9 \pm 2.2	12.8 \pm 1.2	88.9 \pm 3.5	1.2 \pm 0.04	0.84 \pm 0.00
WT to 3'SL T	464.8 \pm 19.0	2.83 \pm 0.17	3.79 \pm 0.18	30.9 \pm 4.7	62.2 \pm 7.0	31.2 \pm 2.8	50.7 \pm 2.4	14.4 \pm 0.9	84.3 \pm 2.3	1.3 \pm 0.04	0.87 \pm 0.05

Data are expressed as mean \pm SEM (WT-3'SL Sed n=4, WT-3'SL T n=5). Unpaired two-tailed Student's t-test was used.

Supplementary Table 10. Cardiac parameters from PBS or 3SL fed male offspring at 24 weeks of age.

Males	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
Offspring Fed PBS	447.6 \pm 5.3	3.07 \pm 0.15	4.23 \pm 0.11	37.6 \pm 4.4	75.2 \pm 4.6	37.7 \pm 1.1	50.6 \pm 3.1	16.8 \pm 0.4	111.3 \pm 5.6	1.3 \pm 0.05	0.91 \pm 0.03
Offspring Fed 3'SL	439.6 \pm 11.9	3.34 \pm 0.13	4.48 \pm 0.09*	46.4 \pm 4.6	92.2 \pm 4.4*	45.8 \pm 1.8*	50.5 \pm 2.9	20.3 \pm 1.3	117.3 \pm 4.0*	1.3 \pm 0.04	0.84 \pm 0.03

Data are expressed as mean \pm SEM (PBS Fed $n=19$, 3'SL Fed $n=9$). Unpaired two-tailed Student's t-test was used. ** $P<0.05$ vs. PBS fed mice.

Supplementary Table 11. Cardiac parameters from PBS or 3SL fed female offspring at 24 weeks of age.

Females	Heart Rate	Diameter (Systole)	Diameter (Diastole)	Volume (Systole)	Volume (Diastole)	Stroke Volume	Ejection Fraction	Cardiac Output	LV Mass	LVAW (Systole)	LVAW (Diastole)
Offspring Fed PBS	453.7 \pm 16.0	3.11 \pm 0.14	4.0 \pm 0.11	38.8 \pm 4.5	70.4 \pm 4.6	31.5 \pm 1.4	45.5 \pm 2.9	14.3 \pm 0.89	96.6 \pm 6.9	1.21 \pm 0.03	0.82 \pm 0.02
Offspring Fed 3'SL	427.0 \pm 10.4	2.79 \pm 0.12	3.97 \pm 0.12	30.0 \pm 3.1	69.5 \pm 4.7	39.5 \pm 1.8**	57.6 \pm 1.8*	16.7 \pm 0.95	102.8 \pm 5.4*	1.4 \pm 0.04**	0.82 \pm 0.04

Data are expressed as mean \pm SEM (PBS Fed $n=18$, 3'SL Fed $n=8$). Unpaired two-tailed Student's t-test was used. ** $P<0.01$ vs. PBS fed mice.

Supplementary Table 12. Primer sequences for liver genes.

Primer	Sequence
GAPDH	ACA CAT TGG GGG TAG GAA CA
GAPDH	AAC TTT GGC ATT GTG GAA GG
Fatp1 R	AGTGGCTCCATCGTGTCCCTCAT
Fatp1 F	TGCCACAGATCGGCAGTTCTA
Lpl R	AAATCTCGAAGGCCTGGTTG
Lpl F	GATGCCCTACAAAGTGTCCA
Gpd1 R	CTGCTCAATGGACTTCCAG
Gpd1 F	CTCATCACGACCTGCTATGG
Gpd2 R	TGAAGGAACAGCCCCAACAG
Gpd2 F	CGGGACTCATCACAATAGCA
Gyk R	GGCCCCAGCTTCATTAGG
Gyk F	CAAATGCAAGCAGGACGATG
Lipe R	TTGCGGTTAGAACGCCACATAG
Lipe F	TGGCACACCATTGACCTG
Ephx2 R	CCCTCAAGCAGTGTTCATTGGC
Ephx2 F	ATCTGGTGGCATAAACGGCGTG
Tpi1 R	CGGTGGGAGCAGTTACTAAA
Tpi1 F	TATGGAGGTTCTGTGACTGGA
Pgk1 R	CTTAGCGCCTCCAAGATA
Pgk1 F	GAGCCTCACTGTCCAAACTA
Pgam1 R	GTACCTGCGATCCTGCTGA
Pgam1 F	GACGATCTTATGATGTCCCACC
Pgam2 R	GACATCCCTTCCAGATGTTT
Pgam2 F	CTGCCTACCTGTGAAAGTCTC
Eno1 R	GAAGAGACCTTTCGGGTGT
Eno1 F	CTTGCTTGCAGCGATCCTA
Eno3 R	CTTCCCATACTGGCCTTGA
Eno3 F	CTGTGCCTGCCTTAATGTG
Pkm R	CAACAGGACGGTAGAGAATGG
Pkm F	CTGTGGAGATGCTGAAGGAG
Fabp5 R	TGTTATCGTGCTCTCCTCCCG
Fabp5 F	GACGACTGTGTTCTCTGTAAACC
Ffar4 R	CAGAGTATGCCAAGCTCAGCGT
Ffar4 F	GTGACTTTGAACCTCCTGGTGCC
Fabp3 R	TTGTCTCCTGCCGTCCACTT
Fabp3 F	AGAGTTCGACGAGGGTACAGCA
Acsl1 R	GGCTCGACTGTATCTGTGG

Acsl1 F	ACACTTCCTTGAAGCGATGG
Acsl3 R	GTCTTGGAAATCCTTCTGCC
Acsl3 F	GGCCAACGTGGAAAAGAAAG
Acsl4 R	CCAGGTTGTCTGAAGTGGG
Acsl4 F	GCACCTTCGACTCAGATCAC
Acsl5 R	GCTTCAAACACCCAACATCCCATTGC
Acsl5 F	CGCCCCCATCTCCACTCCAG
Elovl3 R	ATGAGTGGACGCTTACGCAGGA
Elovl3 F	GTGCTTGCCATCTACACGGATG
Glut4 (Slc2a4) R	CGGTCAGGCGCTTAGACTC
Glut4 (Slc2a4) F	ATCATCCGGAACCTGGAGG
Hk2 R	GGAAGCGGACATCACAAATC
Hk2 F	AGAGAACAAAGGGCGAGGAG
Gpi1 R	CCCGATTCTCGGTGTAGTTG
Gpi1 F	ATGGGCATATTCTGGTGGAC
Pfkm R	TTCCTGTCAAAGGGAGTTGG
Pfkm F	CTGGTGCTGAGGAATGAGAA
Pfkp R	TCCCACCCACTTGCAGAAT
Pfkp F	AAGCTATCGGTGTCCTGACC
Cd36 R	TGG GTT TTG CAC ATC AAA GA
Cd36 F	TGG AGC TGT TAT TGG TGC AG
Cpt1a R	CAG CGA GTA GCG CAT AGT CA
Cpt1a F	AAAGATCAATCGGACCCCTAGACA
Cs R	CGAGGGTCAGTCTCCTCAGTAC
Cs F	GACTACATCTGGAACACACTCAATTCA
Fatp4 R	CAAAGGACAGGATCGGGCTATTG
Fatp4 F	GACTTCTCCAGCCGTTCCACA
Fbp1 R	TTCCGATGGACACAAGGCAGTC
Fbp1 F	TGCTGAAGTCGTCCCTACGCTAC
G6pc R	GTAGCAGGTAGAATCCAAGCGC
G6pc F	AGGTCGTGGCTGGAGTCTTGT
Idh3a R	GCCATGTCCTTGCCTGCAATGT
Idh3a F	GCAGGACTGATTGGAGGTCTT
Lcad R	ACT TCT CCA GCT TTC TCC CA
Lcad F	TTT CCG GGA GAG TGT AAG GA
Mcad R	AAG CCC TTT TCC CCT GAA
Mcad F	GAT GCA TCA CCC TCG TGT AAC
Mdh2 R	CCTTGAGGCAATCTGGCAACTG
Mdh2 F	TCACTCCTGCTGAAGAACAGCC
Nrf1 R	GCACCACATTCTCCAAAGGT

Nrf1 F	CAACAGGGAAGAAACGGAAA
Nrf2 R	TTGCTCCATGTCCTGCTCTATGCT
Nrf2 F	AGGTTGCCACATTCCCAAACAAG
Ogdh R	ATCCAGCCAGTGCTTGATGTGC
Ogdh F	GGTGTGCGTCAATCAGCCTGAGT
Pck1 R	TGTCTTCACTGAGGTGCCAGGA
Pck1 F	GCGGATGACATTGCCTGGATGA
Pcx R	GCAATCGAAGGCTGCGTACAGT
Pcx F	GGATGACCTCACAGCCAAGCAT
Pdha1 R	CGCAAACTTGTTGCCTCTCGG
Pdha1 F	GTGAGAACAAACCGCTATGGCATG
Pdk4 R	GCGGTCACTAATCCTCAGAGGA
Pdk4 F	GTCGAGCATCAAGAAAACCGTCC
Pfk1 R	TGAGGCTGACTGCTTGATGCGA
Pfk1 F	CCATCAGCAACAATGTGCCTGG
Pgc1a R	CATCCCTCTTGAGGCCCTTCGTG
Pgc1a F	GAATCAAGCCACTACAGACACCG
Pgc1b R	GCTCTGGTAGGGGCAGTGA
Pgc1b F	TCCTGTAAAAGCCCAGTAT
Tfam R	CCCATGCTGGAAAAACACTT
Tfam F	GTCCATAGGCACCGTATTGC
Acox R	CCGATATCCCCAACAGTGATG
Acox F	GGGAGTGCTACGGGTTACATG
Pdk4 R	GCGGTCACTAATCCTCAGAGGA
Pdk4 F	GTCGAGCATCAAGAAAACCGTCC
Pkrl R	GATGCCATCGCTCACTTCTAGG
Pkrl F	CGAAAAGCCAGTGATGTGGTGG
Aldoa R	GAAAGTGACCCCAGTGACAG
Aldoa F	GCGACCACCATGTCTATCTG
Cidea R	CGAAGGTGACTCTGGCTATTCC
Cidea F	GGTGGACACAGAGGAGTTCTTC

Supplementary Table 13. Primer sequences for cardiac genes.

Primer	Sequence
Mfn1 F	GCAGACAGCACATGGAGAGA
Mfn1 R	GATCCGATTCCGAGCTTCCG
Mfn 2 F	TGCACCGCCATATAGAGGAAG
Mfn2 R	TCTGCAGTGAACCTGGAATG
Opa1 F	ACCTTGCCAGTTAGCTCCC
Opa1 R	TTGGGACCTGCAGTGAAGAA
CypD F	AGATGTCAAATTGGCAGGGGG

CypD R	TGCGCTTTCGGTATAGTGCT
Drp1 F	ATGCCAGCAAGTCCACAGAA
Drp1 R	TGTTCTCGGGCAGACAGTT
Fis1 F	GCTGGTTCTGTGTCCAAGAGCA
Fis1 R	GACATAGTCCCCTGTCCTCT
Nrf1 F	CAACAGGAAGAACGGAAA
Nrf1 R	GCACCACATTCTCCAAGGT
Nrf2 F	AGGTTGCCACATTCCAAACAAG
Nrf2 R	TTGCTCCATGTCCCTGCTCTATGCT
Tfam F	GTCCATAGGCACCGTATTGC
Tfam R	CCCATGCTGGAAAAACACTT
Pgc1a F	GAATCAAGCCACTACAGACACCG
Pgc1a R	CATCCCTCTTGAGCCTTCGTG
Actin 2 F	TGCTGACAGAGGCACCACTGAA
Actin 2 R	CAGTTGTACGTCCAGAGGCATAG
Vim F	CGGAAAGTGAATCCTTCAGG
Vim R	AGCAGTGAGGTCAAGGCTGGAA
Collagen I F	CCTCAGGGTATTGCTGGACAAC
Collagen I R	CAGAAGGACCTTGTGTTGCCAGG
Collagen II F	TTCTGTGGGTCTGCTGGAAA
Collagen II R	TTGTCACCTCGGATGCCTTGAG
Collagen III F	GACCAAAAGGTGATGCTGGACAG
Collagen III R	CAAGACCTCGTGCTCCAGTTAG
Ddr 2 F	TCATCCTGTGGAGGCAGTTCTG
Ddr2 R	CTGTTCACTTGGTGATGAGGAGC
Timp1 F	TCTTGGTTCCCTGGCGTACTCT
Timp1 R	GTGAGTGTCACTCTCCAGTTGC
Mmp2 F	GAGACCATGCAGTCAGCTCTAG
Mmp2 R	TAGAGCTGCCTCTTGTCTGGTC
Mmp 9 F	GCTGACTACGATAAGGACGGCA
Mmp 9 R	TAGTGGTGCAGGCAGAGTAGGA
BNP F	TCCTAGCCAGTCTCCAGAGCAA
BNP R	GGTCCTCAAGAGCTGTCTCTG
ANP F	TACAGTGCAGGTGTCCAACACAG
ANP R	TGCTCCTCAGTCTGCTCACTC
SERCA2 F	GTGAAGTGCCATCAGTATGACGG
SERCA2 R	GTGAGAGCAGTCTCGGTAGCTT
b-MHC F	GCTGGAAGATGAGTGCTCAGAG
b-MHC R	TCCAAACCAGCCATCTCCTCTG
a-MHC F	GCTGGAAGATGAGTGCTCAGAG
a-MHC R	CCAGCCATCTCCTCTGTTAGGT

RPL7 F	TCGCAGATTGAAGGTGAAGCG
RPL7 R	CCATCCGAATCTCAGTGC GGTA